

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strike through~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 11 and 13 in accordance with the following:

1. (original) An off-track retry method for recovering data incorrectly read due to a read error caused by an off-track error in a disk drive, the off-track retry method comprising:
 - extracting read gain characteristics while varying an off-track amount;
 - ~~determining~~ measuring an off-track amount at a place where the read error has occurred, based upon the read gain characteristics;
 - reading data using the ~~determined~~ measured off-track amount;
 - determining whether the read data is normal; and
 - determining whether the data incorrectly read due to the read error has been recovered.
2. (original) The off-track retry method of claim 1, wherein the reading the data comprises:
 - reading the data by moving a head away from a centerline of a track by up to a determined off-track amount; and
 - reading the data by moving the head away from the centerline of the track by up to an off-track range having a predetermined difference with the determined off-track amount.
3. (original) The off-track retry method of claim 1, wherein the determining the off-track amount comprises:
 - measuring read gains while gradually varying an off-track amount within ~~a~~ the predetermined off-track range;
 - determining an off-track direction based upon a gradient of a curve of the measured read gains; and
 - identifying an off-track amount corresponding to a minimum of the measured read gains.
4. (original) The off-track retry method of claim 1, wherein the determining the off-track amount comprises:

measuring read gains at a place on the centerline of a track and a plurality of places at either side of the centerline of the track and determining an off-track direction based upon a gradient of a curve of the measured read gains;

measuring read gains while gradually varying an off-track amount within a predetermined off-track range; and

identifying an off-track amount corresponding to a minimum of the measured read gains.

5. (original) The off-track retry method of claim 1, wherein the determining of the off-track amount comprises:

determining an off-track direction and a degree to which data is recorded off-track.

6. (original) The off-track retry method of claim 1, wherein the read gain is smallest when data is magnetized in a negative direction off of a centerline of a desired track and the off-track amount reaches a predetermined off-track amount in the negative direction; and

the read gain increases as the off-track amount increases.

7. (original) The off-track retry method of claim 1, wherein the read gain is smallest when data is magnetized in a positive direction off of a centerline of a desired track and the off-track amount reaches a predetermined off-track amount in the positive direction; and

the read gain decreases as the off-track amount increases.

8. (original) An off-track retry method for recovering data comprising:

measuring an off-track amount at a location where a read error occurs;

reading data based upon the measured off-track amount;

determining whether the read data is normal; and

determining whether the data incorrectly read due to the read error has been recovered.

9. (original) The off-track retry method of claim 8, wherein the measuring the off-track amount at a location wherein a read error occurs comprises:

extracting read gain characteristics while varying the off-track amount; and

determining an off-track direction and a degree based upon the read gain characteristics.

10. (original) The off-track retry method of claim 9, wherein the off-track direction is

identified based upon a gradient of a read gain curve showing the read gain characteristics.

11. (currently amended) An off-track retry method for recovering data incorrectly read due to a read error caused by an off-track error in a disk drive, the off-track retry method comprising:

determining an off-track direction and an off-track amount at a place where the read error has occurred and at the same time by measuring read gains at different places while gradually varying the off-track amount within a predetermined off-track range;

reading data using the determined off-track direction and the off-track amount;

determining whether the read data is normal; and

determining whether the data incorrectly read due to the read error has been recovered.

12. (original) The off-track retry method of claim 11, wherein the off-track direction is identified based upon a gradient of a read gain curve showing the measured read gains.

13. (currently amended) An off-track retry method for recovering data incorrectly read due to a read error caused by an off-track error in a disk drive, the off-track retry method comprising:

obtaining an off-track amount at a place where the read error has occurred by measuring a read gain at three points;

reading the data using the off-track amount obtained;

determining whether the read data is normal; and

determining whether the data incorrectly read due to the read error has been recovered.

14. (original) The off-track retry method of claim 13, wherein the obtaining the off-track amount by measuring a read gain at three points comprises:

measuring the read gain at a centerline of a track;

measuring the read gains at a first point and a second point on either side of the centerline of the track;

determining an off-track direction based upon a gradient of a curve of the measured read gains;

remeasuring the read gains while varying the off-track amount in a predetermined off-track range;

differentiating the measured read gains; and

determining the off-track amount based upon a maximum value of the result of the differentiation.